



TSMC-00-068BD

April 5, 2004

To: Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Fr: George O. Saile, Reg. No. 19,572  
28 Davis Avenue  
Poughkeepsie, N.Y. 12603

Subject:

Serial No. 10/790,919 03/02/04

Ta-Lee Yu

BIPOLAR ESD PROTECTION STRUCTURE

#### INFORMATION DISCLOSURE STATEMENT

Enclosed is Form PTO-1449, Information Disclosure Citation  
In An Application.

The following Patents and/or Publications are submitted to  
comply with the duty of disclosure under CFR 1.97-1.99 and  
37 CFR 1.56.

#### CERTIFICATE OF MAILING

I hereby certify that this correspondence is being  
deposited with the United States Postal Service as first class  
mail in an envelope addressed to: Commissioner for Patents,  
P.O. Box 1450, Alexandria, VA 22313-1450, on April 12, 2004.

Stephen B. Ackerman, Reg.# 37761

Signature/Date SB Ackerman 4/12/04

The report by J. Chen et al., "Design and Layout of a High ESD Performance NPN Structure for Submicron BiCMOS/Bipolar Circuits," IEEE Journal 1996, 0-7803-2753-5/96, pp. 227-232, describes how ESD efficiency is typically measured by dividing the ESD "threshold" voltage by the area of the ESD protection device and discusses various ESD protection device layouts.

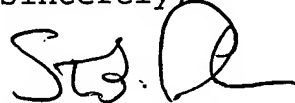
U.S. Patent 5,850,095 to Chen et al., "ESD Protection Circuit Using Zener Diode and Interdigitated NPN Transistor," describes an electrostatic discharge (ESD) protection circuit.

U.S. Patent 5,341,005 to Canclini, "Structure for Protecting an Integrated Circuit from Electrostatic Discharges," discloses different structures for ESD protection.

U.S. Patent 5,528,189 to Khatibzadeh, "Noise Performance of Amplifiers," discloses an amplifier with ESD protection with emitter finger layouts.

U.S. Patent 5,301,084 to Miller, "Electrostatic Discharge Protection for CMOS Integrated Circuits," discusses ESD protection circuits.

Sincerely,

A handwritten signature in black ink, appearing to read "S.B. Ackerman", written over a horizontal line.

Stephen B. Ackerman,  
Reg. No. 37761

Assignment Number

10/790,919

Ta Lee Yu

03/02/04

Group 21 Unit

(Use several sheets if necessary)

## A circular stamp from the Office of the Patent &amp; Trademark Office. The text "OFFICE OF THE PATENT &amp; TRADEMARK OFFICE" is written around the perimeter. In the center, the date "APR 15 2004" is stamped. Above the date, the word "RECEIVED" is partially visible.

FOREIGN PATENT DOCUMENTS												
	DOCUMENT NUMBER						DATE	COUNTRY	CLASS	SUBCLASS	Translation	
							YES				NO	

-	J.Chen et al., "Design and Layout of a High ESD Performance NPN Structure for Submicron BiCMOS/ Bipolar Circuits", IEEE Jnl 1996, 0-7803-2753- 5/96, pp.227-232.

DATE COMPLETED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.